governed by an approved repowering plan shall notify the Administrator in writing at least 60 days in advance of the date on which the existing unit is to be removed from operation so that the qualified repowering technology can be installed, or is to be replaced by another unit with the qualified repowering technology, in accordance with the plan.

(c) *Commencement of operation.* Not later than 60 days after the unit repowered under an approved repowering plan commences operation at full load, the designated representative of the unit shall submit a report comparing the actual hourly emissions and percent removal of each pollutant controlled at the unit to the actual hourly emissions and percent removal at the existing unit under the plan prior to repowering, determined in accordance with part 75 of this chapter.

(d) *Decision to terminate.* If at any time before the end of the repowering extension the owners and operators decide to terminate good faith efforts to design, construct, and test the qualified repowering technology on the unit to be repowered under an approved repowering plan, then the designated representative shall submit a notice to the Administrator by the earlier of the end of the repowering extension or a date within 30 days of such decision, stating the date on which the decision was made.

§ 72.95 Allowance deduction formula.

The following formula shall be used to determine the total number of allowances to be deducted for the calendar year from the allowances held in an affected unit's compliance subaccount as of the allowance transfer deadline applicable to that year:

Total allowances deducted = Tons emitted + Allowances surrendered for underutilization + Allowances deducted for Phase I extensions + Allowances deducted for substitution or compensating units

where:

(a) ''Tons emitted'' is the total tons of sulfur dioxide emitted by the unit during the calendar year, as reported in accordance with part 75 of this chapter.

(b) ''Allowances surrendered for underutilization'' is the total number of allowances calculated in accordance with § 72.92 (a) and (c).

(c) ''Allowances deducted for Phase I extensions'' is the total number of allowances calculated in accordance with § 72.42(f)(1)(i).

(d) ''Allowances deducted for substitution or compensating units'' is the total number of allowances calculated in accordance with the surrender requirements specified under § 72.41(d)(3) or (e)(1)(iii)(B) or § 72.43(d)(2).

[58 FR 3650, Jan. 11, 1993, as amended at 62 FR 55485, Oct. 24, 1997]

§ 72.96 Administrator's action on compliance certifications.

(a) The Administrator may review, and conduct independent audits concerning, any compliance certification and any other submission under the Acid Rain Program and make appropriate adjustments of the information in the compliance certifications and other submissions.

(b) The Administrator may deduct allowances from or return allowances to a unit's Allowance Tracking System account in accordance with part 73 of this chapter based on the information in the compliance certifications and other submissions, as adjusted.

APPENDIX A TO PART 72—METHODOLOGY FOR ANNUALIZATION OF EMISSIONS LIMITS

For the purposes of the Acid Rain Program, 1985 emissions limits must be expressed in pounds of SO_2 per million British Thermal Unit of heat input (lb/mmBtu) and expressed on an annual basis.

Annualization factors are used to develop annual equivalent SO_2 limits as required by section 402(18) of the CAA. Many emission limits are enforced on a shorter term basis (or averaging period) than annually. Because of the variability of sulfur in coal and, in some cases, scrubber performance, meeting a particular limit with an averaging period of less than a year and at a specified statutory emissions level would require a lower annual average SO_2 emission rate (or annual equivalent SO_2 limit) than would the shorter term statutory limit. EPA has selected a compliance level of one exceedance per 10 years. For example, an SO_2 emission limit of 1.2 lbs/MMBtu, enforced for a scrubbed unit over a 7-day averaging period, would result in an annualized SO_2 emission limit of 1.16 lbs/

MMBtu. In general, the shorter the averaging period, the lower the annual equivalent would be. Thus, the annualization of limits is established by multiplying each federally enforceable limit by an annualization factor that is determined by the averaging period and whether or not it's a scrubbed unit.

TABLE A–1—SO_2 EMISSION AVERAGING PERIODS AND ANNUALIZATION FACTORS

Definition	Annualization factor	
	Scrubbed Unscrubbed	
	Unit	Unit
Oil/gas unit	1.00	1.00
<=1 day	0.93	0.89
1 week	0.97	0.92
30 days	1.00	0.96
90 days	1.00	1.00
1 year	1.00	1.00
Not specified	0.93	0.89
At all times	0.93	0.89
Coal unit: No Federal limit or limit unknown	1.00	1.00

APPENDIX B TO PART 72—METHODOLOGY FOR CONVERSION OF EMISSIONS LIMITS

For the purposes of the Acid Rain Program, all emissions limits must be expressed in pounds of SO_2 per million British Thermal Unit of heat input (lb/mmBtu).

The factor for converting pounds of sulfur to pounds of SO_2 is based on the molecular weights of sulfur (32) and SO_2 (64). Limits expressed as percentage of sulfur or parts per million (ppm) depend on the energy content of the fuel and thus may vary, depending on several factors such as fuel heat content and atmospheric conditions. Generic conversions for these limits are based on the assumed average energy contents listed in table A–2. In addition, limits in ppm vary with boiler operation (e.g., load and excess air); generic conversions for these limits assume, conservatively, very low excess air. The remaining factors are based on site-specific heat rates and capacities to develop conversions for Btu per hour. Standard conversion factors for residual oil are 42 gal/bbl and 7.88 lbs/gal.

TABLE B–1—CONVERSION FACTORS

[Emission limits converted to lbs SO_2/MMBtu by multiplying as below]

Unit measurement	Plant fuel type			
	Bituminous coal	Subbituminous coal	Lignite coal	Oil
Lbs sulfur/ MMBtu	2.0	2.0	2.0	2.0
% sulfur in fuel	1.66	2.22	2.86	1.07
Ppm SO_2	0.00287	0.00384	.....	0.00167
Ppm sulfur in fuel	.....	.....	.....	0.00334
Tons SO_2/hour	2,000,000/(HEATRATE*SUMNDCAP*capacity factor) [1]			
Lbs SO_2/hour	1,000/(HEATRATE*SUMNDCAP*capacity factor) [1]			

[1] In these cases, if the limit was specified as the ''site'' limit, the summer net dependable capability for the entire plant is used; otherwise, the summer net dependable capability for the unit is used. For units listed in the NADB, ''HEATRATE'' shall be that listed in the NADB under that field and ''SUMNDCAP'' shall be that listed in the NADB under that field. For units not listed in the NADB, ''HEATRATE'' is the generator net full load heat rate reported on Form EIA–860 and ''SUMNDCAP'' is the summer net dependable capability of the generator (in MWe) as reported on Form EIA–860.

TABLE B–2—ASSUMED AVERAGE ENERGY CONTENTS

Fuel type	Average heat content
Bituminous Coal	24 MMBtu/ton.
Subbituminous Coal	18 MMBtu/ton.
Lignite Coal	14 MMBtu/ton.
Residual Oil	6.2 MMBtu/bbl.

APPENDIX C TO PART 72—ACTUAL 1985 YEARLY SO_2 EMISSIONS CALCULATION

The equation used to calculate the yearly SO_2 emissions (SO2) is as follows:

SO2 = (coal SO_2 emissions) + (oil SO_2 emissions) (in tons)

If gas is the only fuel, gas emissions are defaulted to 0.

Each fuel type SO_2 emissions is calculated on a yearly basis, using the equation:

fuel SO_2 emissions (in tons) = (yrly wtd. av. fuel sulfur %) × (AP–42 fact.) × (1−scrb. effic. %/100) × (units conver. fact.) × (yearly fuel burned)

For coal, the yearly fuel burned is in tons/yr and the AP–42 factor (which accounts for the ash retention of sulfur in coal), in lbs SO_2 ton coal, is by coal type:

Coal type	AP–42 factor
Bituminous, anthracite	39 lbs/ton
Subbituminous	35
Lignite	30

For oil, the yearly fuel burned is in gal/yr. If it is in bbl/yr, convert using 42 gal/bbl oil. The AP–42 factor (which accounts for the oil

density), in lbs SO_2/thousand gal oil, is by oil type:

Oil type	AP–42 factor
Distillate (light)	142 lbs/1,000 gal
Residual (heavy)	157

For all fuel, the units conversion factor is 1 ton/2000 lbs.

APPENDIX D TO PART 72—CALCULATION OF POTENTIAL ELECTRIC OUTPUT CAPACITY

The potential electrical output capacity is calculated from the maximum design heat input from the boiler by the following equation:

$$\frac{\text{max. design heat input}}{3} \times \frac{\times 1 \text{ kw-hr}}{3413 \text{ Btu}} \times \frac{\times 1 \text{ MWe}}{1000 \text{ Kw}}$$

For example:

(1) Assume a boiler with a maximum design heat input capacity of 340 million Btu/hr.

(2) One-third of the maximum design heat input capacity is 113.3 mmBtu/hr. The one-third factor relates to the thermodynamic efficiency of the boiler.

(3) To express this in MWe, the standards conversion of 3413 Btu to 1 kw-hr is used: 113.3×10^6 Btu/hr×1 kw-hr / 3413 Btu×1 MWe / 1000 kw=33.2 MWe

[58 FR 15649, Mar. 23, 1993]

PART 73—SULFUR DIOXIDE ALLOWANCE SYSTEM

Subpart A—Background and Summary

Subpart B—Allowance Allocations

Subpart C—Allowance Tracking System

Subpart D—Allowance Transfers

Subpart E—Auctions, Direct Sales, and Independent Power Producers Written Guarantee

Subpart F—Energy Conservation and Renewable Energy Reserve